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NC STATE UNIVERSITY NORTH CAROLINA COOPERATIVE EXTENSION

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 Investment &  
 Protect the  
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JC Raulston Arboretum Plant Focus

**Hydrangeas – Hallmarks of the Southern Garden**

**H**ydangeas have always been an old favorite and are even more popular with the newer hybrids. There are more than 100 different varieties, including the climbing hydrangea, dwarf container plants, large oak-leaved varieties, red-stemmed choices and hydrangeas with pure white blooms. There are too many cultivars to list, but hydrangeas are usually placed in three basic categories: *Hydrangea macrophylla*, also called bigleaf, mop head or French hydrangea; *Hydrangea quercifolia*, oakleaf hydrangea; and *Hydrangea paniculata*, often referred to as PeeGee hydrangea.

The most popular hydrangea is the big-leaf hydrangea, *Hydrangea macrophylla*. This is an older cultivar, usually pink or blue, depending on soil pH. Soil pH affects available aluminum uptake responsible for color change, however, a few white cultivars are available. Acidic soils produce blue flowers and alkaline soils produce pink petals. Newer cultivars such as 'Endless Summer' and 'Blushing Bride' are touted as ever-blooming plants. When planting, locate big-leaved hydrangeas in a semi-shaded spot where the soil is moist and drains well.

Oakleaf hydrangea, *Hydrangea quercifolia*, is a dramatic, white-blooming shrub with four seasons of interest that include fall foliage color, leaf texture and bark interest. It thrives in much drier locations than its cousins.

*Hydrangea paniculata* types boast blooms that are usually panicle-shaped (somewhat cone-shaped) rather than ball-shaped. Often, in late summer, the blooms develop a pink shade as the blooms age, extending their beauty into the fall. PeeGees are desirable because they tolerate pruning well. Prune at any time except when they begin forming bloom heads in the summer. PeeGees often get very large, with some the size of small trees in the mountains. However, compact forms for smaller spaces are appearing in nurseries.

Learn more at [www.hydrangeashydrangeas.com](http://www.hydrangeashydrangeas.com) and [www.americanhydrangeasociety.org](http://www.americanhydrangeasociety.org). **Darrell Blackwelder**



*Hydrangea macrophylla*  
 Robert E. Lyons ©

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**2** Growing Tomatoes in the Home Garden



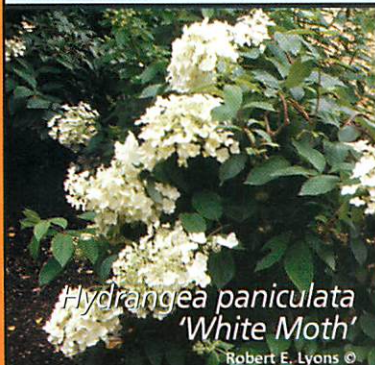
**3** Enviro-Tip



**4** Garden Spot



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*Hydrangea paniculata*  
 'White Moth'  
 Robert E. Lyons ©



*Hydrangea quercifolia*  
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*Hydrangea quercifolia*  
 Robert E. Lyons ©



## Growing Tomatoes in the Home Garden

If I had to choose the vegetable that I enjoy the most it would have to be the tomato. A thick slice of tomato between two slices of bread with a little salt and mayonnaise and you've got a meal. I have been growing tomatoes for only 25 years but I'll share some of my techniques for success with tomatoes.

### When to Plant

Tomatoes are warm-season plants so plant them after the last chance of frost has passed. Tomatoes do not like temperatures below 55 degrees F at night. Blossom drop can occur in early spring when daytime temperatures are warm, but night temperatures fall below 55 degrees F. In summer, blossoms will drop when temperatures exceed 90 degrees in the day and stay above 76 at night.

### Garden Site

Plant in a garden site that is in full sun with a soil pH between 6.0 and 6.5. It is very important to rotate your planting sites so that you do not plant tomatoes in the same place the following year. Plant in the same spot every fourth year. Blossom-end rot occurs frequently in North Carolina. The condition is caused by calcium deficiency in the developing fruit. To help provide calcium to the plant throughout the growing season, broadcast about a cup of lime in and around the planting hole while transplanting.

### Stake, Fertilize, Water, Weed

Stake your tomato plants for greater success. The plants take less space, are easier to pick and if you have any insects or diseases they are easily identified, removed and sprayed if needed. While you can allow tomatoes to grow on the ground, tomatoes can be lost due to soil rot, insects and animals. Staked and pruned tomatoes produce fewer but larger fruit than caged or unsupported plants.

Tomatoes respond well to fertilizer applications, especially phosphorus. Excess nitrogen fertilizer can result in plants with extremely vigorous vine growth but little fruit production. Apply 2 1/2 to 3 pounds of a complete fertilizer, such as 5-10-10, 5-20-20 or 8-16-16 per 100 square feet of garden area. Work the fertilizer into the soil about 2 weeks before planting. Apply additional nitrogen fertilizer after the first fruits have formed and are about the size of a dime. If the fertilizer is applied too soon, the blossom and small fruit may drop.

Tomatoes are usually determinate or indeterminate in growth habit. Determinate (D) tomato

plants grow to a certain height and then stop. They also flower and set all their fruit within a relatively short period of time. This is an advantage if the tomatoes are being grown primarily for canning purposes. Indeterminate tomato plants grow, flower and set fruit over the entire growing season. Once the tomato plants are established, apply a mulch to conserve moisture and suppress weed growth. Pull weeds by hand or remove by shallow cultivation. An even moisture supply is important, especially when the tomato fruits begin to develop. If the soil becomes too dry, blossom-end rot can be a problem. Too much water at one time may split ripening fruit.

### Disease Resistance

Another characteristic to look for when choosing tomato cultivars is disease resistance. Many cultivar names are followed by one or more letters indicating resistance to verticillium wilt (V), fusarium wilt (F) or nematodes (N). Disease resistance can be an important consideration, especially if you have experienced these problems with tomatoes in the past.

### Cultivars for North Carolina

There are hundreds of tomato cultivars available for the home gardener. I have tried dozens of varieties and usually continue to grow the ones that I have consistent success with each year. I prefer determinate varieties and will plant a spring crop and another crop in July for fall harvest. I experiment with new varieties each year and observe flavor, yield and disease resistance. I also prefer tomato varieties that have "keeping" ability. Canned tomatoes provide robust flavor throughout the off-season. I have tried several of the heritage-type tomatoes and while they may be tasty they are not resistant to any diseases, are the first to die and the fruit does not "keep" well and must be eaten very quickly.

For recommended varieties for different areas of North Carolina contact your local Cooperative Extension Center. Here is a short list of tomato varieties that I have had success with in the upper piedmont of North Carolina.

**Fresh Market:** Carolina Gold, Mountain Fresh Plus, Better Boy, Mountain Spring, Park's Whopper Improved

**Cherry:** Sweet 100, Sun Gold  
*Terry Garwood*



### Gardentalk

*"It's difficult to think anything but pleasant thoughts while eating a home-grown tomato."*

Lewis Grizzard



## Q&amp;A

## Is it possible to control fire blight without chemicals?

Apples and pears are commonly plagued with fire blight, a bacterial disease that can severely damage blossoms, fruit, fruit spurs, twigs and branches. Homeowners sometimes face this disease in home orchards and occasionally on other ornamental plants when humidity levels are high, mixed with temperatures above 60 degrees.

If you suspect your plants may have this disease, look first for water-soaked, wilted or brown to black blossoms. This normally is the first sign that appears early in the season. Eventually twigs and watersprouts will become wilted at their tips, resembling the appearance of a shepherd's crook. Limb

and trunk blight will also occur when the bacteria moves down into larger branches or the trunk.

This bacterium, *Erwinia amylovora*, overwinters in diseased tissue within the tree. In the spring, bacteria is carried by wind, rain and insects to natural openings in the flowers, stomata in the leaves or through wounds. Control of this disease may be difficult for homeowners, but many control practices help reduce the severity of fire blight. Look for resistant varieties at time of planting and prune out all blighted twigs before growth starts in the spring. Be sure to disinfect your pruners with a diluted bleach and water mixture (1 part bleach to 10 parts water) between each cut. *Diane Turner*

## Buy Locally, Support NC Farms

This newsletter may tout the benefits of growing your own produce but we know that may not be possible for everyone. A great alternative exists: shop local farmers' markets. By doing so, the farmer benefits as does the entire community. Buying locally grown produce can mean better nutrition, better quality and better flavor because the produce is often fresher and allowed more time on the plant to reach full ripeness and maturity.

Supporting local growers helps reduce use of fossil fuels for packaging and transporting fruits and vegetables nationwide. Additionally, when you buy produce locally the money stays in the community. Farmers also can provide you with varieties of produce chosen for taste instead of how well they can travel.

Cooperative Extension works with farmers across the state to help them increase production and market to local consumers. To find a farmers' market near you contact your local county Cooperative Extension Center or go to [www.ncagr.com/ncproducts](http://www.ncagr.com/ncproducts) or [www.ncfarmfresh.com](http://www.ncfarmfresh.com). Other helpful sites: [www.foothillsfresh.com](http://www.foothillsfresh.com) [www.homegrownhandmade.com](http://www.homegrownhandmade.com) [www.handmadeinamerica.org](http://www.handmadeinamerica.org)

*David Barkley*

## ENVIRO-TIP

## Not All Insects Should "Bug" You

Gardeners normally wage what seems a never-ending battle with insects, mites and other so-called pests. But there are many bugs that are beneficial to nature and man.

Most of us are familiar with butterflies, moths and bees. They are the pollinators of many of our fruits and vegetables. They also provide beauty and interest to our gardens. One of the lesser-known benefits of many insects is that of pest control. Lady beetles, praying mantises, wasps and spiders all play a role in controlling the voracious appetites of other bugs like aphids. The larvae of lady beetles consume aphids, mealybugs and even some soft scales. Praying mantises hunt down and eat anything they can find, including each other. Small wasps lay eggs inside many caterpillars, and the young destroy the caterpillars as they hatch. Spiders love to catch any type of bug they can and make a meal of it.

How can we encourage all these great garden helpers? One way is to

lessen the amount of pesticides we use, and to use all pesticides carefully. Identify the insect that is causing you trouble and use as specific a pesticide as possible. Accepting a bit of damage will often give the predator insect time to do his or her work. Washing the bugs off the plants with some water will also lessen the chance of killing off the predator insects.

Many plants host populations of beneficial insects among their foliage. Dill, borage, Shasta daisy, fennel and parsley are just a few of the plants that provide food and shelter for many beneficial insects. Water also helps attract beneficials to your garden. Shallow pools of cool, clear water will provide for many insects.

Observation and patience are your two best tools for developing populations of beneficial insects. Look for the presence of these helpful insects before you spray, and spray only as needed. Give your "beneficial neighbors" time to do their work before you do anything. *Jeff Rieves*



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## Gardening in May

### Lawns

- Fertilize warm-season grasses this month. Do not fertilize cool-season grasses such as Kentucky 31 tall fescue and Kentucky bluegrass.
- Sow warm-season lawns now.

### Ornamentals

- Fertilize summer-flowering plants such as rose of Sharon and crape myrtle this month.
- Prune hybrid rhododendrons and azaleas as they finish blooming. Feed with an acid fertilizer now. Also watch for rhododendron borers and spray if they are present.
- Begin pinching garden mums and continue through mid-July.
  - Scout for bagworms on shrubs and trees; spray when needed. Pay extra attention to junipers, Leyland cypress and Japanese maples.
  - Watch for azalea and camellia leaf galls and pick them off as they form.
- Allow spring bulb foliage to continue to grow. Do not cut back until yellowing of foliage occurs.
  - To control poison ivy and honey-suckle, begin spraying this month with a recommended herbicide.

### Edibles

- Fertilize long season vegetables such as corn 6 to 8 weeks after germination.
  - Start spraying for squash vine borer now before damage occurs.
  - Plant late season vegetables such as pumpkins, peppers, cucumbers, okra, sweet potatoes and Southern peas.
  - Spray blueberry plants for blueberry borer in mid-May.
- Frequently harvest early season vegetables such as lettuce, cabbage and broccoli to keep them growing vigorously.
  - Scout for early blight in tomatoes and start fungicide sprays at first signs of the disease.

*Donna Teasley*

### Morrow Mountain

**State Park** is located in the ancient Uwharrie Mountains in Stanly County. Waters and woodlands are home to a variety of plant and animal life. Frogs and salamanders live in and near streams and marshes, and warm rains bring the mating calls of spring peepers and chorus frogs. Birds enjoy the wooded environment in all seasons. In the upland forests, observant hikers may spot a scarlet kingsnake, one of North Carolina's most colorful snakes, or catch a glimpse of a white-tailed deer. Many people visit Morrow Mountain each spring to see the wild flowers. History buffs will enjoy a visit to the home-stead of Dr. Francis Kron. Dr. Kron was the first medical doctor to practice medicine in the southern piedmont of the state. A noted horticulturist, he was also actively involved in education. His home, doctor's office, infirmary and greenhouse were reconstructed to appear much as they did in 1870.

Visit <http://ils.unc.edu/parkproject/visit/momo/do.html>.

*Amy-Lynn Albertson*

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- ▶ North Carolina State Grange/Extension Foundation
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